

STATE OF SOUTH CAROLINA

(Caption of Case)

Petition of the Office of Regulatory Staff to
Establish Dockets to Consider Implementing
the Requirements of 1251 (Net Metering and
Additional Standards of the Energy Policy Act
of 2005)

BEFORE THE
PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

COVER SHEET

DOCKET

NUMBER: 2005 - 385 - E

(Please type or print)

Submitted by: Catherine E. HeigelSC Bar Number: 9268Address: Duke Energy CorporationTelephone: 704.382.8123P O Box 1006 / EC03TFax: 704.382.4494Charlotte, NC 28201-1006

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DOCKETING INFORMATION (Check all that apply)

- ☐ Emergency Relief demanded in petition ☐ Request for item to be placed on Commission's Agenda expeditiously
- ☐ Other: _____

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)			
<input checked="" type="checkbox"/> Electric	<input type="checkbox"/> Affidavit	<input type="checkbox"/> Letter	<input type="checkbox"/> Request	
<input type="checkbox"/> Electric/Gas	<input type="checkbox"/> Agreement	<input type="checkbox"/> Memorandum	<input type="checkbox"/> Request for Certificatio	
<input type="checkbox"/> Electric/Telecommunications	<input type="checkbox"/> Answer	<input type="checkbox"/> Motion	<input type="checkbox"/> Request for Investigator	
<input type="checkbox"/> Electric/Water	<input type="checkbox"/> Appellate Review	<input type="checkbox"/> Objection	<input type="checkbox"/> Resale Agreement	
<input type="checkbox"/> Electric/Water/Telecom.	<input type="checkbox"/> Application	<input type="checkbox"/> Petition	<input type="checkbox"/> Resale Amendment	
<input type="checkbox"/> Electric/Water/Sewer	<input type="checkbox"/> Brief	<input type="checkbox"/> Petition for Reconsideration	<input type="checkbox"/> Reservation Letter	
<input type="checkbox"/> Gas	<input type="checkbox"/> Certificate	<input type="checkbox"/> Petition for Rulemaking	<input type="checkbox"/> Response	
<input type="checkbox"/> Railroad	<input type="checkbox"/> Comments	<input type="checkbox"/> Petition for Rule to Show Cause	<input type="checkbox"/> Response to Discovery	
<input type="checkbox"/> Sewer	<input type="checkbox"/> Complaint	<input type="checkbox"/> Petition to Intervene	<input type="checkbox"/> Return to Petition	
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Consent Order	<input type="checkbox"/> Petition to Intervene Out of Time	<input type="checkbox"/> Stipulation	
<input type="checkbox"/> Transportation	<input type="checkbox"/> Discovery	<input checked="" type="checkbox"/> Prefiled Testimony	<input type="checkbox"/> Subpoena	
<input type="checkbox"/> Water	<input type="checkbox"/> Exhibit	<input type="checkbox"/> Promotion	<input type="checkbox"/> Tariff	
<input type="checkbox"/> Water/Sewer	<input type="checkbox"/> Expedited Consideration	<input type="checkbox"/> Proposed Order	<input type="checkbox"/> Other:	
<input type="checkbox"/> Administrative Matter	<input type="checkbox"/> Interconnection Agreement	<input type="checkbox"/> Protest		
<input type="checkbox"/> Other:	<input type="checkbox"/> Interconnection Amendment	<input type="checkbox"/> Publisher's Affidavit		
	<input type="checkbox"/> Late-Filed Exhibit	<input type="checkbox"/> Report		

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2005-385-E

Petition of the Office of Regulatory Staff to)
Establish Dockets to Consider)
Implementing the Requirements of Section) CERTIFICATE OF SERVICE
1251 (Net Metering and Additional Standards)
of the Energy Policy Act of 2005))

I, Catherine E. Heigel, hereby certify that copies of Duke Energy Carolinas, LLC's Direct Testimony of witness Barbara G. Yarbrough has been either e-mailed or placed in the U.S. Mail on this date, to the parties of record at the addresses shown below, with sufficient postage attached:

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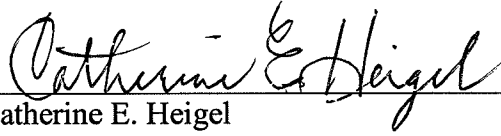
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This 19th day of May 2009.

A handwritten signature in cursive script, reading "Catherine E. Heigel", written over a horizontal line.

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BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

DOCKET NO. 2005-385-E

In the Matter of:

Petition of the Office of Regulatory Staff to
Establish Dockets to Consider Implementing
the Requirements of 1251 (Net Metering and
Additional Standards of the Energy Policy Act
of 2005)

)
)
) **DIRECT TESTIMONY OF**
) **BARBARA G. YARBROUGH**
) **FOR DUKE ENERGY CAROLINAS, LLC**
)
)

1 **I. INTRODUCTION AND PURPOSE**

2 **Q. PLEASE STATE YOUR NAME, ADDRESS, AND POSITION WITH DUKE**
3 **ENERGY CAROLINAS, LLC.**

4 A. My name is Barbara G. Yarbrough. My business address is 526 South Church
5 Street, Charlotte, North Carolina. I am Rates Director for Duke Energy Carolinas,
6 LLC (referred to hereinafter as “Duke Energy Carolinas” or the “Company”). I have
7 responsibility for assisting in the development, implementation, and proper
8 administration of the Company’s rate schedules and service regulations, as well as
9 for administering the Public Service Commission of South Carolina’s (the
10 “Commission”) Rules and Regulations. I also am responsible for responding to
11 customer inquiries, including those directed to the South Carolina Office of
12 Regulatory Staff (“ORS”).

13 **Q. PLEASE STATE BRIEFLY YOUR EDUCATION AND PROFESSIONAL**
14 **EXPERIENCE.**

15 A. I have a Bachelor of Science in Home Economics from the University of North
16 Carolina at Greensboro. I joined Duke Power Company (now known as Duke
17 Energy Carolinas) in 1974, and since 1979 I have held several positions in the
18 Company’s Rates and Regulatory Affairs Department. I have testified before this
19 Commission and the North Carolina Utilities Commission (the “NCUC”) in
20 complaint and other proceedings.

21 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

22 A. The purpose of my testimony is to provide an update to the Commission on the
23 Company’s efforts to comply with Commission Order No. 2008-416 in this docket.

1 Specifically, I will describe the net metering tariffs currently being offered by the
2 Company and the level of customer interest and participation in these rate offerings.
3 In addition, I will outline changes the Company proposes to make to these tariffs to
4 encourage greater customer participation.

5 **II. COMPLIANCE WITH COMMISSION ORDER NO. 2008-416**

6 **Q. WHAT ACTIONS HAS DUKE ENERGY CAROLINAS TAKEN TO**
7 **COMPLY WITH COMMISSION ORDER NO. 2008-416?**

8 A. Commission Order No. 2008-416 (the “2008 Order”) required the Company to:

- 9 1. Make net metering plans available to its customers no later than July 1,
10 2008, according to the tariffs submitted to the Commission;
- 11 2. Have trained and knowledgeable customer service personnel available to
12 assist customers by July 1, 2008; and
- 13 3. Make explanations of its net metering programs available on its web site.

14 2008 Order at 3. Accordingly, Duke Energy Carolinas filed two net metering
15 tariffs, Net Metering (“Rider NM”) (a time of use rate option), and Small
16 Customer Generator Rider (“Rider SCG”) (a flat rate option), which were
17 effective July 1, 2008. Customers interested in net metering can access Duke
18 Energy Carolinas’ web site to get information about (i) the Standard for
19 Interconnecting Small Generation 100 kW or Less with Electric Power Systems
20 (“Interconnection Standard”) approved by the Commission in Docket No. 2005-387-
21 E, (ii) the application process, (iii) the interconnection contract, and (iv) the rate
22 options for small customer generators. In addition to the two net metering
23 options, there is also information on the web site for customers who comply with

1 the Interconnection Standard but choose a “buy all – sell all” arrangement. The
2 Company has employees who are trained fully in the interconnection
3 requirements and available rate options. These employees have been designated
4 to respond to customer inquiries, as well as handle the customer application,
5 installation, contract and inspection process, and assist the customer in the rate
6 selection process.

7 **Q. PLEASE DESCRIBE THE COMPANY’S TIME OF USE RATE OPTION**
8 **FOR NET METERING.**

9 A. Rider NM is designed to provide an appropriate pricing mechanism and the means
10 for interconnecting residential and small general service customers to the Duke
11 Energy Carolinas system, and to allow the customer to offset the load that otherwise
12 would be required from the Company. Rider NM is available to residential and non-
13 residential customers receiving concurrent service from the Company on time of use
14 rate schedules RT and OPT, where a photovoltaic, wind-powered, micro-hydro, or
15 biomass-fueled generation source of energy is installed on the customer’s side of the
16 delivery point for the customer’s own use. The customer’s generation source must
17 be interconnected and operated in parallel with the Company’s distribution system,
18 in conformity with the Interconnection Standard. The Interconnection Standard
19 provides that the Nameplate Rating of the customer’s installed generation equipment
20 must not exceed the estimated maximum monthly kilowatt demand of the residence
21 or 20 kW, whichever is less. For nonresidential facilities, the customer’s installed
22 generation equipment must not exceed the estimated maximum monthly kilowatt
23 demand of the facility or 100 kW, whichever is less. Rate Schedules RT and OPT

1 allow parallel operation when used in conjunction with Rider NM.

2 **Q. PLEASE DESCRIBE THE COMPANY'S FLAT RATE OPTION FOR NET**
3 **METERING.**

4 A. Like Rider NM, the Company's Rider SCG is available for generators up to 20
5 kW for residential customers and up to 100 kW for nonresidential customers.
6 This Rider was filed in response to the Public Service Commission's Order No.
7 2007-618 (the "2007 Order") requiring utilities to provide a "flat rate" option.¹ In
8 accordance with the 2007 Order, the tariff was designed (i) to allow residential
9 and small commercial customers to pay the utility's existing flat kWh rate for any
10 power purchased from the utility, while receiving a credit for any excess
11 generation provided to the utility on a peak/off-peak or real time pricing basis,
12 and (ii) to eliminate, as much as possible, any cross-subsidization of customers.

13 **III. COMPANY EXPERIENCE WITH NET METERING**

14 **Q. HOW DOES NET METERING WORK?**

15 A. For customers wishing to participate in Rider NM, the Company installs a time of
16 use meter that registers on-peak and off-peak usage and the customer's highest 30-
17 minute integrated demand during peak hours. For non-residential customers, off-
18 peak demand also is measured. The bills for net metering customers include a Basic
19 Facilities Charge, a Demand Charge, On-Peak Energy Charges, and Off-Peak
20 Energy Charges. Excess On-Peak Energy and Off-Peak energy generated by the
21 customer's system may be used to offset On-Peak and Off-Peak Energy Charges,

¹ *Order on Consideration of the Appropriate Standards to be Used for Net Metering and Smart Metering in South Carolina*, Docket No. 2005-385-E, Order No. 2007-618, at 3 (Aug. 30, 2007).

1 respectively, but the energy charges will not be less than zero. Any excess energy
2 credits may be carried forward and applied to On-Peak and Off-Peak Energy
3 Charges, as appropriate, in successive billing months for up to 12 months.

4 The flat-rate option, Rider SCG, is available with any of the standard
5 residential and general service rates and allows the customer to offset load with
6 output from the generator on a one-for-one basis up to the customer's load. When
7 the generator supplies more than the customer's load, the customer is paid a credit
8 in the same billing month for excess energy delivered to the grid at the avoided
9 cost rates under the Company's rate schedule PP (SC). A bi-directional meter, for
10 which there is an incremental Basic Facilities Charge, is required to determine the
11 kilowatt hours delivered and received. A standby charge is applied for
12 backstanding the customer's generator because the underlying rates used with
13 Rider SCG for small customers typically do not include a demand charge.

14 **Q. HAS THE COMPANY EXPERIENCED MUCH CUSTOMER INTEREST IN**
15 **ITS NET METERING RATE OPTIONS IN THE PAST YEAR?**

16 A. Interest has been low, but is increasing. Duke Energy Carolinas currently has two
17 customers on Rider NM in conjunction with a time of use rate, 10 customers and one
18 pending on Rider SCG (the flat rate option), and one customer on Schedule HP-X, a
19 non-residential hourly pricing rate that allows parallel generation.

20 **Q. WHY DO YOU BELIEVE SO FEW CUSTOMERS TAKE ADVANTAGE OF**
21 **THESE RATE OFFERINGS?**

22 A. The most significant barrier is the large capital investment customers must make to
23 become self-generators, even for small systems. These small systems, typically 2

1 kW to 4 kW for residential customers, cannot offset all of the customers' energy
2 needs. Solar photovoltaic ("PV") systems operate a few hours a day, at best.
3 Additionally, wind systems are costly and do not provide a consistent, reliable
4 source of energy in the Company's service territory. The Company must backstand
5 such systems when the sun is not shining and the wind is not blowing.

6 For those customers who do make such investments, they typically do not
7 select Rider NM because there are more lucrative payments for the customers'
8 energy delivered to the grid available from Palmetto Clean Energy, Inc. ("PaCE").
9 PaCE is a non-profit entity that pays subsidies to renewable energy generators using
10 funds collected from voluntary tariff contributions by customers of Duke Energy
11 Carolinas, Progress Energy Carolinas, Inc., and South Carolina Electric & Gas
12 Company, as well as from individual contributions made directly to PaCE.
13 Currently, the subsidy premium available to producers of solar energy from PV
14 systems of 10 kW or less is 15¢/kWh. These payments are not available for
15 customers on Rider NM because any credits are "rolled over" and retained by the
16 customer for 12 months. Clearly, a rate option that provides 15¢/kWh from PaCE,
17 in addition to any credits paid under Rider SCG, is a more attractive option than one-
18 for-one net metering under Rider NM. In fact, the payments from PaCE are so
19 attractive, the Company has two customers who have elected to sell the entire output
20 of the generator at their home or business under a separate purchased power
21 agreement, rather than net meter. Under Schedule PP, the customer gets capacity
22 credits and energy credits at avoided cost rates plus the 15 ¢/kWh from PaCE.

1 **IV. PROPOSED REVISIONS TO NET METERING TARIFFS**

2 **Q. DOES DUKE ENERGY CAROLINAS PROPOSE TO MAKE CHANGES TO**
3 **ITS NET METERING TARIFFS IN THIS PROCEEDING?**

4 A. Yes. Duke Energy Carolinas' current rate options for small customer generators
5 comply with Commission Order No. 2007-618, which requested that utilities
6 "eliminate, as much as possible, any cross-subsidization of customers."²
7 However, Duke Energy Carolinas proposes to change Rider NM to be consistent
8 with the recent net metering order of the NCUC in Docket No. E-100, Sub 83.
9 Additionally, these changes address some of the recommendations contained in the
10 report, *Net Metering in South Carolina: Current Status and Recommendations*
11 (the "Net Metering Report"), submitted by ORS and the South Carolina Energy
12 Office in response to the Joint Resolution, H.3395, approved on May 13, 2008.
13 As I discuss below, Duke Energy Carolinas' proposed changes to its net metering
14 tariffs are linked inextricably to its proposal regarding the ownership of Renewable
15 Energy Certificates ("RECs").

16 **Q. WHAT CHANGES DOES THE COMPANY PROPOSE?**

17 A. The Company proposes to revise Rider NM to allow customers to be served under
18 any Duke Energy Carolinas' residential, general service, or industrial rate schedule,
19 thereby removing the restriction that the customer be served on a time of use rate,
20 provided that the RECs for customers on a non-time of use rate be retained by the
21 utility. Further, the Company proposes to eliminate the standby charge consistent
22 with Net Metering Recommendation Number 2 in the Net Metering Report, and the
23 Company would not enforce power factor correction for generators 20 kW or less

² *Id.*

1 that use an inverter. In an additional step to make net metering consistent between
2 South Carolina and North Carolina, Duke Energy Carolinas is willing to file for an
3 increase in the maximum size of a nonresidential renewable customer-generator set
4 forth in the Interconnection Standard approved in Docket No. 2005-387-E, from 100
5 kW to 1000 kW, provided that the Commission approve a concomitant change to
6 Rider NM to allow the Company to collect standby charges for generators larger
7 than 100 kW.

8 **Q. WHAT DOES THE COMPANY PROPOSE WITH RESPECT TO RECS?**

9 A. In Order No. 2007-618 in this docket, the Commission indicated that it would
10 address ownership of RECs when a viable market exists, and would look to the
11 parties “to raise the issue at that time.”³ Although there is not a Renewable
12 Portfolio Standard (“REPS”) in South Carolina, a market for out-of-state RECs in
13 North Carolina and other states exists where REPS standards have been
14 implemented. Duke Energy Carolinas therefore proposes that it be allowed to retain
15 the RECs associated with net metering customers in South Carolina. If customers
16 are allowed to net meter on a one-for-one basis at the full retail rate without paying
17 the additional metering or administrative costs and standby charges, cross-
18 subsidization of customer generators by other customers will increase. The
19 Company previously has filed testimony in this docket that cross-subsidization is
20 reduced – but not eliminated – with a time of use rate, or under Rider SCG. Duke
21 Energy Carolinas’ proposal regarding RECs and revised Rider NM is designed to
22 strike an appropriate balance between addressing Net Metering Recommendation
23 No. 2 of the Net Metering Report concerning a one-for-one net metering option,

³ *Id.*

1 while complying with the Commission's previous order that the tariff be designed
2 to eliminate, as much as possible, any cross-subsidization.

3 In the recent net metering proceeding before the NCUC (Docket No. E-
4 100, Sub 83), the utilities in that docket were asked if it would still be necessary
5 to require net metering customers to be on a time of use rate if the RECs were to
6 accrue to the utility. The Company's testimony was that it depended on the type
7 of renewable generation and the value of the REC, but that it appeared that solar
8 RECs may have sufficient value such that a time of use rate was not required,
9 although this was not true of other types of generation. Because virtually all of
10 the renewable small customer-generators on the Duke Energy Carolinas system
11 are solar PV systems, the Company proposes to mitigate the subsidy issues by
12 offering the same treatment of RECs in the Net Metering Rider in South Carolina
13 that was approved in North Carolina. The NCUC's order in Docket No. E-100,
14 Sub 83 ("NCUC Order") provided that the RECs associated with customer
15 generators who subscribe to a non time-of-use rate would accrue to the utility:

16 The Commission recognizes, . . . , that allowing a customer-
17 generator to net meter while taking retail electric service pursuant
18 to a rate schedule other than a TOU-demand rate schedule alters
19 the balance among net metering customers, utilities, and their
20 remaining customers previously found by the Commission to be
21 fair and appropriate. Therefore, in exchange for allowing a net
22 metering customer-generator to elect to take service under a retail
23 rate schedule other than a TOU-demand rate schedule, all RECs
24 associated with the customers' generation should be assigned to
25 the utility at no cost as part of the net metering arrangement.

26
27 NCUC Order, at 13.

28 The ability to retain the RECs also is an important component of the
29 Company's ability to consider expanding net metering to larger size generators.

1 The Company further notes that the costs and benefits may change as REC values
2 change. Allowing those customers who net meter under a time of use rate to
3 retain the RECs is consistent with Net Metering Recommendation No. 5 of the
4 Net Metering Report. A copy of Duke Energy Carolinas' proposed revised Rider
5 NM is attached as Yarbrough Exhibit 1.

6 **Q. WHAT CHANGES DOES THE COMPANY PROPOSE TO RIDER SCG?**

7 A. The Company proposes to cancel Rider SCG and to give its Rider SCG customers
8 the option to move to revised Rider NM or to enter into a buy all – sell all
9 arrangement using the customers' applicable rate schedules for their energy needs
10 and selling the total output of their generator to the Company under purchased
11 power schedule PP (SC). A table showing the changes from the existing Riders NM
12 and SCG to a single, revised Rider NM is shown in Yarbrough Exhibit 2.

13 **Q. WHY IS THE COMPANY PROPOSING THESE CHANGES?**

14 A. The Company believes these changes will appeal to more customer-generators and
15 will give customers additional rate options, both of which should increase customer
16 participation. These changes also help Duke Energy Carolinas maintain greater
17 consistency between its net metering tariff offerings in South Carolina and North
18 Carolina.

19 **Q. ARE THERE DIFFERENCES BETWEEN THE COMPANY'S PROPOSED**
20 **TARIFF REVISIONS IN THIS DOCKET AND ITS NET METERING**
21 **TARIFFS IN NORTH CAROLINA?**

22 A. Yes, there is one difference. Duke Energy Carolinas continues to offer Rider SCG
23 (NC) because of the large number of participating customers in North Carolina. The

1 small number of South Carolina Rider SCG customers will not be impacted
2 adversely by the cancellation of this Rider because they still will have two rate
3 options. Moving to Rider NM provides credit at the full retail rate for the entire
4 output of the customer's generator. With this change, along with the elimination of
5 the standby charge, the customer could expect a bill reduction of at least of \$5.00 to
6 \$10.00 per month over the cost under Rider SCG, depending on the size and output
7 of the generator. If the customer remains interested in receiving payment from
8 PaCE, the buy all – sell all option remains available in conjunction with the
9 Company's purchased power schedule PP (SC). Notwithstanding the difference
10 noted above, the Company believes the revised Rider NM (SC), along with the buy
11 all – sell all arrangement, gives the customer-generator two simple rate options, and
12 is an important step towards achieving consistency with the Company's net metering
13 rider recently approved in North Carolina by the NCUC in Docket No. E-100 Sub
14 83.

15 **V. CONCLUSION**

16 **Q. WERE YARBROUGH EXHIBITS 1 AND 2 PREPARED BY YOU OR**
17 **UNDER YOUR SUPERVISION AND DIRECTION?**

18 A. Yes.

19 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

20 A. Yes, it does.

Rider NM (SC)
Net Metering

AVAILABILITY (South Carolina only)

Available to residential and nonresidential Customers receiving concurrent service from the Company where a photovoltaic, wind-powered, micro-hydro, or biomass-fueled generation source of energy is installed on the Customer's side of the delivery point, for the Customer's own use, interconnected with and operated in parallel with the Company's distribution system.

GENERAL PROVISIONS

1. To qualify for service under this Rider, a residential Customer may be served on any residential rate schedule, but may not be served under Schedule WC or Power Manager. The Nameplate Rating of the Customer's installed generation system and equipment must not exceed the estimated maximum monthly kilowatt (kW) demand of the residence or 20 kW, whichever is less.
2. To qualify for service under this Rider, a nonresidential Customer may be served on one of the Company's general service of industrial rate schedules that does not otherwise provide for parallel operation of a customer generator. The Nameplate Rating of the Customer's installed generation system and equipment must not exceed the Customer's Contract Demand or 1000 kW, whichever is less.
3. If the electricity supplied to the Customer by the Company exceeds the electricity delivered to the grid by the Customer-Generator during a monthly billing period, the Customer-Generator shall be billed for the net electricity in kilowatt hours supplied by the Company, plus any demand or other charges under the applicable rate schedule. If the electricity delivered to the grid by the Customer-Generator exceeds the electricity in kilowatt hours supplied by the utility during a monthly billing period, the Customer-Generator shall be credited for the excess kilowatt hours generated during that billing period. Charges or credits will be determined using the appropriate energy rates of the applicable rate schedule, as further outlined in the RATE paragraph below.
4. All other provisions of the applicable time of use rate schedule including, but not limited to, Determination of Billing Demand, Determination of On-Peak and Off-Peak Hours, Definition of Month, Contract Demand, Adjustment for Fuel Costs, etc. will apply to service supplied under this Rider.
5. If the Customer is not the owner of the premises receiving electric service from the Company, the Company shall have the right to require that the owner of the premises give satisfactory written approval of the Customer's request for service under this Rider.
6. Customers served under this Rider are not eligible to participate in Palmetto Clean Energy, Inc. (PaCE).
7. For any customer receiving service under a non time of use rate schedule, any renewable energy credits (RECs) shall be retained by the Company.

RATE

The rate shall be the applicable rate schedule, and the monthly bill shall be determined as follows:

- I. The Basic Facilities Charge shall be the Basic Facilities Charge from the applicable rate schedule.
- II. The Demand Charge shall be determined from the applicable rate schedule, as appropriate.
- III. Energy Charges (or Credits) shall be based on the net kilowatt hours purchased from or delivered to the Company for the bill month. For any bill month during which the Energy Charges are a net credit, the respective Energy Charges for the month shall be zero. Any Energy Credits shall carry forward on following month's bill. If the customer is on a time of use rate, the energy credit shall carry forward by first applying excess On-Peak kWh against On-Peak kWh charges and excess Off-peak kWh against Off-peak kWh charges, then applying any remaining On-Peak kWh against any remaining Off-Peak kWh charges. Effective with the seasonal rate change on June 1 of each year, any accrued credit will be reset to zero. Credits shall not offset the Basic Facilities Charge or the Demand Charge.
- IV. A Standby Charge of \$ 0.95 per kW per month will apply to all nonresidential customers where the generator is larger than 100 kW

MINIMUM BILL

The monthly minimum bill for Customers receiving service under this Rider shall be no less than Basic Facilities Charge plus, if applicable, any of the following Charges: the Demand Charge, the Economy Demand Charge, the Standby Charge, and the Extra Facilities Charge.

DETERMINATION OF STANDBY CHARGES

The Company will require each Customer served under the Rider with a generator system of more than 100 kW to contract for standby, auxiliary, or breakdown service. For billing purposes, the Standby kW will be based on the Nameplate Rating in kilowatts of the Customer's system.

METERING REQUIREMENTS

The Company will furnish, install, own, and maintain metering to measure the kilowatt demand delivered by the Company to the Customer, and to measure the net kilowatt-hours purchased by the Customer or delivered to the Company. The Company shall have the right to install special metering and load research devices on the Customer's equipment, and the right to use the Customer's telephone line for communication with the Company's and the Customer's equipment.

SAFETY, INTERCONNECTION, AND INSPECTION REQUIREMENTS

This Rider is only applicable for installed generation systems and equipment that comply with the South Carolina Standard for Interconnecting Small Generation 100 kW or less with Electric Power Systems (EPS), hereinafter the "Interconnection Standard." The Customer must comply with the liability insurance requirements of the Interconnection Standard.

The Customer must submit an Application to Interconnect Small Generation 100kW or Less (SC), which must be accepted by the Company, and must pay an application fee in accordance with the Interconnection Standard.

POWER FACTOR CORRECTION

When the average monthly power factor of the power supplied by the Customer to the Company is less than 90 percent or greater than 97 percent, the Company may correct the energy in kilowatt-hours, as appropriate. The Company reserves the right to install facilities necessary for the measurement of power factor. The Company will not install such equipment, nor make a power factor correction, if the generator system is less than 20 kW and uses an inverter.

CONTRACT PERIOD

Each Customer shall enter into a contract for a minimum original term of one (1) year, and shall automatically renew thereafter, except that either party may terminate the contract after one year by giving at least sixty (60) days prior notice of such termination in writing.

The Company reserves the right to terminate the Customer's contract under this Rider at any time upon written notice to the Customer in the event that the Customer violates any of the terms or conditions of this Rider, or operates the generation system and equipment in a manner that is detrimental to the Company or any of its customers. In the event of early termination of a contract under this Rider, the Customer will be required to pay the Company for the costs due to such early termination, in accordance with the Company's South Carolina Service Regulations.

DUKE ENERGY CAROLINAS, LLC

TERMS	CURRENT		PROPOSED
	RIDER NM	RIDER SCG	RIDER NM
Underlying rate	Time-of-use rate	Any rate	Any Rate
Maximum generator size	Residential 20 kW Nonresidential 100 kW	Residential 20 kW Nonresidential 100 kW	Residential 20 kW Nonresidential 1000 kW ¹
Credit for offset up to the customer's load	On-peak and Off-peak Energy charges	Energy charges of the underlying rate	Energy charges of the underlying rate
Excess Energy	On-peak and Off-peak Energy credits carried forward up to 12 months then donated to the utility June 1	Credits paid to customer in the same bill month at avoided costs	Energy credits of the underlying rate carried forward up to 12 months then donated to the utility June 1
Standby Charge	NA	Applies to all customers	Generators > 100 kW
RECs	NA	NA	Retained by the utility unless on a time-of-use rate

¹ Requires Revision to the Interconnection Standard